

**THE RARE BRITISH SHIELDBUG *CARPOCORIS PURPUREIPENNIS*
(DEGEER) (HET.: PENTATOMIDAE) FROM PORTLAND BILL, DORSET**

¹ ANDREW R. COLLINS AND ² BERNARD S. NAU

¹ 228 Kathleen Road, Sholing, Southampton SO19 8GY (E-mail: arc@soton.ac.uk)

² 15 Park Hill, Toddington, Dunstable, Bedfordshire LU5 6AW (E-mail: nau.bs@btinternet.com)

Abstract

A recent record of *Carpocoris purpureipennis* (DeGeer) (Het.: Pentatomidae) from southern Britain is reported. Previous British records are discussed and pointers for the recognition of the species are given.

Introduction

On the 15 October 2005, ARC visited the Portland Bill area (Dorset, VC 9, O. S. grid reference SY 6872) hoping to see interesting migrant birds, but also looking out for any notable insects. However, very few migrant birds were seen, despite the moderate easterly wind and, although there were some fairly warm sunny spells, few insects were active. Towards the end of the day a final look around the area near the Portland Bird Observatory revealed a rather large, dark shieldbug sunning on the south-facing painted surface of a beach hut. The bug was not immediately recognisable appearing dingy purple-brown in overall colour and having the sides of the pronotum drawn into black-tipped and bluntly pointed 'shoulders'. The unusual structure, size and overall colour seemed wrong for any of the familiar shieldbug species. At this point ARC recalled an illustration, in the Field Studies Council's shieldbug guide (Nau, 2004), of a rare species showing this combination of features and the bug was captured for careful examination at home.

The specimen was found to be very similar to the illustration in the FSC guide of *Carpocoris purpureipennis*, aptly named the Black-shouldered Shieldbug, a species known to be a rare vagrant to southern counties. However, as there are other very similar species in Europe the specimen was referred to BSN for formal identification.

Recognition

The Dorset example is a male of length 12mm and superficially resembles *Pentatoma rufipes* (L.), especially by virtue of its rufous legs. However, the antennae are entirely black apart from the 1st segment, which is extensively orange, although not easy to see in the field. On close inspection, the legs are seen to be covered with tiny black spots. The bug has the lateral angle of the pronotum rounded, with the adjacent margin convex both in front and behind the apex of the angle, whereas *P. rufipes* is concave behind its sharply pointed apex.

Stichel (1961) includes 17 genera in his key to the Tribe Carpacorini and several of these are known from the British Isles: *Palomena*, *Holcostethus*, *Carpocoris*, & *Dolycoris*. Stichel separates *Carpocoris* from the first two of the above by its antennae having the 2nd segment distinctly longer than the 3rd, and from *Dolycoris* by its lack of a white basal ring on the 2nd – 5th antennal segments. His key to

species of *Carpocoris* then deals with six species. *Carpocoris pudicus* Poda and *C. melanocerus* Mulsant & Rey are ruled out by the shape of the outer edge scutellum where the taper angle changes; this has a marked indentation not present in the Portland bug. *Carpocoris cyrenaicus* Tamanini is eliminated by its long rostrum, which extends well beyond the hind coxae, but which in *purpureipennis* does not reach beyond the hind coxae. At this point in the key the male claspers (parameres) have to be examined microscopically to distinguish between *C. purpureipennis*, *C. mediterraneus* Tamanini and *C. fuscispinus* (Boheman). Specifically, the position of the end of a keel, along the outer periphery of the curved clasper, relative to the position of a 'tooth' on the inner margin. In the Portland bug, the keel terminates before the 'tooth', eliminating *C. mediterraneus* and *C. fuscispinus* and identifying the present bug as *C. purpureipennis*.



Plate E. *Carpocoris purpeipennis*, Portland Bill, Dorset, 15.x.2005, A. R. Collins.

Nomenclature and previous records

Barclay and Nau (2001) review previous records of *Carpocoris* species in Britain and describe an example of *C. purpureipennis* found in a collection of insects made by students near Bristol on 4 October 1995 (the specimen illustrated in Nau, 2004). This appears to be the only other recent record of a shieldbug of this genus in Britain. The records which pre-date the Bristol example are more difficult to interpret. The few listed by Southwood and Leston (1959) under the name *C. pudicus* (Poda) are considered likely to refer collectively to *C. purpureipennis* (DeGeer) and *C. mediterraneus* Tamanini (Southwood & Leston, 1964). The most recent of these records dates from 1926 at Wye (Kent). The other records comprise another single in Kent, one in Essex, one in Cornwall and six in Devon. The current record is presumed to be the first to have been seen in Dorset.

Conclusions

The observatory area at Portland Bill is remarkable for the large numbers of migrant insects, especially Lepidoptera, that are recorded there. The present bug is the second continental species of shieldbug to have been found here in 2005 (*vide* Slade et al., 2005). It seems highly likely that this example of *Carpocoris purpureipennis* was a primary migrant and it is reasonable to anticipate that further examples may be found in the near future, given ongoing climatic amelioration. There has never been any evidence of this species breeding in Britain, but this is now perhaps a possibility.

References

- Barclay, M. V. L. and Nau, B. S., 2001. A recent record of *Carpocoris purpureipennis* from the West of England. *Entomologists' Monthly Magazine* **137**: 72.
- Nau, B. S., 2004. *Guide to the Shieldbugs of the British Isles*, Field Studies Council, AIDGAP guide.
- Slade, D., Collins, A. R., & Nau, B. S., 2005. *Eurydema ornatum* (L.) (Hem.: Pentatomidae) established on the Dorset coast and a key to European *Eurydema* species. *Entomologists Record and Journal of Variation* **117**: 221-227.
- Southwood, T. R. E. and Leston, D., 1959. *Land and Water Bugs of the British Isles*. Warne.
- Southwood, T.R.E. and Leston, D. (1964), "Suborder : Heteroptera" in: *A check list of British insects*. 2nd edition (Revised), Kloet, G.S. & Hincks, W.D., (ed.), Royal Entomological Society of London, *Handbooks for the identification of British insects*, Vol.XI, Part 1.
- Stichel, W., 1961. *Illustrierte Bestimmungstabellen der Wanzen. II Europa*, vol. 4, book publ. by W. Stichel, Berlin.
-
-